



SIMATIC DP, ELECTRONIC MODULE FOR ET 200S, 2 AI STANDARD 15 MM WIDE +/-10 V; 13 BIT + SIGN +/-5 V; 12 BIT+ SIGN, 1..5V; 12BIT, CYCLE TIME 65 MS/CHANNEL WITH LED SF (GROUP FAULT)

Figure similar

Supply voltage

Load voltage L+

- | | |
|-------------------------------|-------------------------|
| • Rated value (DC) | 24 V; From power module |
| • Reverse polarity protection | Yes |

Input current

- | | |
|---|-------|
| from load voltage L+ (without load), max. | 30 mA |
| from backplane bus 3.3 V DC, max. | 10 mA |

Power losses

- | | |
|------------------|-------|
| Power loss, typ. | 0.6 W |
|------------------|-------|

Address area

Address space per module

- | | |
|----------------------------------|--------|
| • Address space per module, max. | 4 byte |
|----------------------------------|--------|

Analog inputs

- | | |
|---|--|
| Number of analog inputs | 2 |
| permissible input voltage for voltage input (destruction limit), max. | 35 V; 35 V continuous; 75 V for max. 1 ms (mark to space ratio 1:20) |
| Cycle time (all channels) max. | Number of active channels per module x basic conversion time |

Input ranges

- | | |
|--------------------------|-----|
| • Voltage | Yes |
| • Current | No |
| • Thermocouple | No |
| • Resistance thermometer | No |
| • Resistance | No |

Input ranges (rated values), voltages	
• 1 V to 5 V	Yes
• -10 V to +10 V	Yes
• -5 V to +5 V	Yes
Cable length	
• shielded, max.	200 m
Analog value creation	
Measurement principle	integrating
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	14 bit; +/-10 V: 13 bits + sign, +/-5 V: 13 bits + sign; 1 to 5 V: 13 bits
• Integration time (ms)	16,7 / 20 ms
• Conversion time (per channel)	65 ms; 55 / 65 ms
Smoothing of measured values	
• Parameterizable	Yes; In four stages by means of digital filtering
• Step: None	Yes; 1 x cycle time
• Step: low	Yes; 4 x cycle time
• Step: Medium	Yes; 32 x cycle time
• Step: High	Yes; 64 x cycle time
Errors/accuracies	
Linearity error (relative to input range), (+/-)	0.01 %
Temperature error (relative to input range), (+/-)	0.01 %/K
Crosstalk between the inputs, min.	-50 dB
Repeat accuracy in steady state at 25 °C (relative to input area), (+/-)	0.05 %
Operational limit in overall temperature range	
• Voltage, relative to input area, (+/-)	0.6 %
Basic error limit (operational limit at 25 °C)	
• Voltage, relative to input area, (+/-)	0.4 %
Interference voltage suppression for $f = n \times (f_1 \pm 1 \%)$, f_1 = interference frequency	
• Series mode interference (peak value of interference < rated value of input range), min.	70 dB
• common mode voltage (USS < 2.5 V) , min.	90 dB
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	No
Diagnostic messages	
• Wire break	Yes; Measuring range 1 to 5 V only
• Group error	Yes
• Overflow/underflow	Yes
Diagnostics indication LED	
• Group error SF (red)	Yes

Parameter	
Remark	4 byte
Diagnosis: wire break	Disable / enable (only in measuring range 1 to 5 V)
Measurement type/range	deactivated / +/-5 V / 1 to 5 V / +/-10 V
Group diagnostics	Disable / enable
Overflow/underflow	Disable / enable

Galvanic isolation	
Galvanic isolation analog inputs	
• between the channels	No
• between the channels and the backplane bus	Yes
• between the channels and the load voltage L+	Yes

Permissible potential difference	
between inputs and MANA (UCM)	2 V AC PP
between MANA and M internally (UISO)	75V DC/60V AC

Isolation	
Isolation checked with	500 V DC

Dimensions	
Width	15 mm
Height	81 mm
Depth	52 mm

Weights	
Weight, approx.	40 g
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